

AMENDMENTS TO THE CLAIMS

In the claims:

(Currently Amended) A fuel blend for use in an internal combustion engine, the send comprising. 1. fuel blend comprising:

a hydrocarbon-containing fuel component selected from the group consisting of gasoline and diesel;

an oxygen-containing component capable of providing oxygen for combustion of the fuel component under conditions prevailing during the combustion cycle of the internal combustion engine, the oxygen-containing component providing substantially all of the oxygen derived from the fuel blend in this manner;

wherein the major oxygen-providing agent of the oxygen-containing component is one or more consists essentially of one or more compounds having the general formula (I):

$$R_2 - O - (CO) - R_1$$
 (I)

wherein R₁ is selected from hydrogen, lower alkyl, lower alkenyl and lower alkynyl groups;

R₂ is selected from lower alkyl, lower alkenyl and lower alkynyl groups, or a group having the general formula (II):

$$R_3 - (CO) - O - R_4 -$$
 (II)

wherein R₃ is selected from lower alkyl, lower alkenyl and lower alkynyl groups; and

R₄ is selected from lower alkyl groups.

the oxygen-containing component being present in an amount sufficient to provide an oxygen-content in the fuel blend of at least 1% by weight.

2. (Original) A fuel blend as claimed in claim 1, wherein R_1 is selected from hydrogen, C_1 or C_2 alkyl, C_2 alkenyl and C_2 alkynyl groups.

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- 3. (Original) A fuel blend as claimed in claim 2, wherein R_1 is selected from hydrogen, C_1 or C_2 alkyl.
- 4. (Original) A fuel blend as claimed in claim 3, wherein R_1 is methyl.
- 5. (Original) A fuel blend as claimed in claim 3, wherein R₁ is ethyl.
- 6. (Original) A fuel blend as claimed in claim 1, wherein R_2 is selected from C_1 to C_4 alkyl, C_2 alkenyl and C_2 alkynyl groups.
- 7. (Original) A fuel blend as claimed in claim 6, wherein R_2 is C_1 or C_2 alkyl.
- 8. (Original) A fuel blend as claimed in claim 7, wherein R₂ is methyl.
- 9. (Original) A fuel blend as claimed in claim 7, wherein R₂ is ethyl.
- 10. (Original) A fuel blend as claimed in claim 1, wherein the compound of general formula (I) is methyl acetate.
- 11. (Original) A fuel blend as claimed in claim 1, wherein the compound of general formula (I) is ethyl acetate.
- 12. (Original) A fuel blend as claimed in claim 1, wherein the compound of general formula (I) is methyl formate.
- 13. (Original) A fuel blend as claimed in claim 1, wherein the compound of general formula (I) is ethyl formate.

MAY 12 2003 (Original) A fuel blend as claimed in claim 1, wherein the compound of general formula (I) is tertiary butyl acetate.

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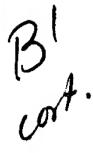
- 15. (Original) A fuel blend as claimed in claim 1, wherein R_2 is a group of general formula (II), in which R_3 is a C_1 to C_4 alkyl.
- 16. (Original) A fuel blend as claimed in claim 15, wherein R₄ is a C₁ to C₄ alkyl.
- 17. (Previously Amended) A fuel blend as claimed in claim 15, wherein R_3 and R_4 are each independently selected from C_1 or C_2 alkyl.
- 18. (Original) A fuel blend as claimed in claim 1, in which the compound of general formula (I) is ethylene glycol diacetate.
- 19. (Previously Cancelled)
- 20. (Original) A fuel blend as claimed in claim 1, wherein the major oxygen-providing component comprises a first compound of formula (I), in which R₂ is ethyl, and a second compound of formula (I), in which R₂ is methyl.
- 21. (Original) A fuel blend as claimed in claim 20, wherein both the first and second compounds are compounds in which R_1 is a C_1 to C_4 alkyl.
- 22. (Original) A fuel blend as claimed in claim 21, wherein the first compound and the second compound are present in a ratio of from 1:5 to 5:1.
- 23. (Original) A fuel blend as claimed in claim 21, wherein the first compound and the second compound are present in a ratio of from 1:1 to 1:1.5.
- 24. (Original) A fuel blend as claimed in claim 23, wherein the first compound is methyl acetate and the second compound is ethyl acetate.

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- 25. (Original) A fuel blend as claimed in claim 1, wherein the major oxygen-providing component comprises a first compound of formula (I), in which R_2 is a group of general formula (II), and a second compound of formula (I), in which R_2 is a C_1 to C_4 alkyl.
- 26. (Original) A fuel blend as claimed in claim 25, wherein the first compound is a compound in which R_1 is a C_1 to C_4 alkyl.
- 27. (Original) A fuel blend as claimed in claim 26, wherein the second compound is a compound in which R_1 is a C_1 to C_4 alkyl.
- 28. (Original) A fuel blend as claimed in claim 27, wherein the first compound is ethylene glycol diacetate.
- 29. (Original) A fuel blend as claimed in claim 28, wherein the second compound is selected from methyl acetate, ethyl acetate and mixtures thereof.
- 30. (Original) A fuel blend as claimed in claim 25, wherein the first compound and second compound are present in a ratio of from 0.5:1 to 10:1.
- 31. (Original) A fuel blend as claimed in claim 30, wherein the first compound and second compound are present in a ratio of from 1:1 to 5:1.
- 32. (Original) A fuel blend as claimed in claim 1, further comprising a stabilizer.
- 33. (Original) A fuel blend as claimed in claim 32, wherein the stabilizer is selected from alcohols having from 1 to 8 carbon atoms.
- 34. (Original) A fuel blend as claimed in claim 33, wherein the stabilizer is selected from alcohols having from 2 to 5 carbon atoms.

- 35. (Original) A fuel blend as claimed in claim 34, wherein the stabilizer is ethanol.
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- 36. (Original) A fuel blend as claimed in claim 32, wherein the compound of general formula (I) and the stabilizer are present in a ratio of from 20:1 to 150:1.
- 37. (Original) A fuel blend as claimed in claim 36, wherein the compound of general formula (I) and the stabilizer are present in a ratio of from 75:1 to 125:1.
- 38. (Cancelled)
- 39. (Cancelled)
- 40. (Cancelled)
- 41. (Cancelled)
- 42. (Original) A fuel blend as claimed in claim 1, further comprising a biocide.
- 43. (Original) A fuel blend as claimed in claim 1, wherein the hydrocarbon-containing fuel component is gasoline and the compound of general formula (I) is present in an amount sufficient to provide an oxygen-content in the fuel blend of 1 to 5 percent by weight.
- 44. (Original) A fuel blend as claimed in claim 1, wherein the hydrocarbon-containing fuel component is diesel and the compound of general formula (I) is present in an amount sufficient to provide an oxygen-content in the fuel blend of 1 to 10 percent by weight.
- 45. (Original) An oxygenating additive for a hydrocarbon-containing fuel comprising: a first compound having a general formula (III):

$$R_7 - (CO) - O - R_6 - O - (CO) - R_5$$
 (III)



wherein R₅ is selected from lower alkyl, lower alkenyl and lower alkynyl groups; R₆ is selected from lower alkyl; and

wherein R₇ is selected from lower alkyl, lower alkenyl and lower alkynyl groups;

and

a second compound having a general formula (IV):

$$R_9 - O - (CO) - R_8 \tag{IV}$$

wherein R₈ is selected from hydrogen, lower alkyl, lower alkenyl and lower alkynyl groups; and

R₉ is selected from lower alkyl, lower alkenyl and lower alkynyl groups.

- (Original) An oxygenating additive as claimed in claim 45, wherein R₅ is selected 46. from C_1 to C_4 alkyl.
- 47. (Original) An oxygenating additive as claimed in claim 46, wherein R₅ is methyl.
- (Original) An oxygenating additive as claimed in claim 45, wherein R₆ is ethyl.
- (Original) An oxygenating additive as claimed in claim 45, wherein R₇ is selected 49. from C_1 to C_4 alkyl.
- 50. (Original) An oxygenating additive as claimed in claim 49, wherein R₇ is methyl.
- (Original) An oxygenating additive as claimed in claim 45, wherein the 51. compound of general formula (III) is ethylene glycol diacetate.

- 52. (Original) An oxygenating additive as claimed in claim 45, wherein R_8 is selected from hydrogen, and C_1 to C_4 alkyl.
- 53. (Original) An oxygenating additive as claimed in claim 52, wherein R₈ is methyl.
- 54. (Original) An oxygenating additive as claimed in claim 45, wherein R_9 is selected from C_1 to C_4 alkyl.
- 55. (Original) An oxygenating additive as claimed in claim 54, wherein R₉ is selected from methyl and ethyl.
- 56. (Original) An oxygenating additive as claimed in claim 45, wherein the compound of general formula (IV) is selected from methyl acetate and ethyl acetate and mixtures thereof.
- 57. (Original) An oxygenating additive as claimed in claim 45, wherein the compound of general formula (III) and the compound of general formula (IV) are present in a ratio of from 0.5:1 to 5:1.
- 58. (Original) An oxygenating additive as claimed in claim 57, wherein the compound of general formula (III) and the compound of general formula (IV) are present in a ratio of from 1:1 to 2.5:1.
- 59. (Original) An oxygenating additive as claimed in claim 45, further comprising a biocide.
- 60. (Original) An oxygenating additive as claimed in claim 45, further comprising a stabilizer.
- 61. (Original) An oxygenating additive as claimed in claim 60, wherein the stabilizer is selected from alcohols having from 2 to 5 carbon atoms.



62. (Original) An oxygenating additive as claimed in claim 61, wherein the stabilizer is ethanol.

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- 63. (Original) An oxygenating additive as claimed in claim 60, wherein the ratio of the combined amounts of the compounds of general formulae (III) and (IV) to the stabilizer is from 20:1 to 150:1.
- 64. (Original) An oxygenating additive as claimed in claim 63, wherein the ratio of the combined amounts of the compounds of general formulae (III) and (IV) to the stabilizer is from 75:1 to 125:1.
- 65. (Cancelled)
- 66. (Cancelled)
- 67. (Cancelled)
- 68. (Cancelled)
- 69. (Cancelled)